

**WHAT IS CLAIMED IS:**

- 1 1. A method comprising:
  - 2 checking a state of a control bit that specifies whether to
  - 3 assemble an output from multiple virtual tributary (VT1.5/VT2)
  - 4 or tributary unit (TU11/TU12) connections or handle the output
  - 5 as an synchronous transport signal (STS) or administrative
  - 6 unit (AU-3/AU-4) connection; and
  - 7 switching a predetermined number of entries together based
  - 8 on a state of the control bit.
- 1 2. The method of claim 1 wherein the control bit is set by a
- 2 programmer.
- 1 3. The method of claim 1 further comprising
- 2 handling the output as an STS connection when the control
- 3 bit is set.
- 1 4. The method of claim 1 further comprising
- 2 assembling the output from multiple VT/TU connections when
- 3 the control bit is not set.
- 1 5. The method of claim 1 further comprising
- 2 handling the output as an AU-3/AU-4 connection when the
- 3 control bit is not set.
- 1 6. The method of claim 1 further comprising
- 2 assembling the output from multiple VT connections when the
- 3 control bit is set.
- 1 7. The method of claim 1 further comprising
- 2 storing the control bit in a connection memory.

- 1 8. The method of claim 1 further comprising storing the  
2 control bit in a register.
- 1 9. The method of claim 1 further comprising  
2 checking a state of a second control bit.
- 1 10. The method of claim 9 wherein the second control bit is  
2 associated with independent and concatenated payloads.
- 1 11. The method of claim 9 further comprising  
2 cross-connecting a second payload with a first payload if  
3 the second control bit is set.
- 1 12. The method of claim 9 further comprising  
2 cross-connecting a second payload with a first payload if  
3 the second control bit is not set.
- 1 13. The method of claim 9 further comprising storing the  
2 second control bit in a connection memory.
- 1 14. The method of claim 9 further comprising storing the  
2 second control bit in a register.
- 1 15. The method of claim 8 further comprising  
2 checking the second control bit only if the first control  
3 bit is set.
- 1 16. A computer program product tangible embodied on a  
2 computer readable medium, for provisioning cross-connects  
3 in network switching environment comprising instructions  
4 for causing a computer to:

5       check a state of a control bit that specifies whether to  
6       assemble an output from multiple virtual tributary/tributary  
7       unit (VT/TU) connections or handle the output as an  
8       synchronous transport signal (AU-3/AU-4) connection; and  
9       switch a predetermined number of entries together based on  
10      a state of the control bit.

1

1    17. The computer program product of claim 16 wherein the  
2       control bit is set by a programmer.

1    18. The computer program product of claim 16 further  
2       comprising instructions to:  
3       store the control bit in a connection memory.

1    19. The computer program product of claim 16 further  
2       comprising instructions to store the control bit in a  
3       register.

1    20. The computer program product of claim 16 further  
2       comprising instructions to:  
3       check a state of a second control bit that is associated  
4       with independent and concatenated payloads.

1    21. The computer program product of claim 16 further  
2       comprising instructions to store the second control bit in  
3       a connection memory.

1    22. The computer program product of claim 16 further  
2       comprising instructions to store the second control bit in  
3       a register.

1 23. The computer program product of claim 16 further  
2 comprising instructions to:  
3 check the second control bit only if the first control bit  
4 is set.

1 24. Apparatus comprising:  
2 a memory including a control bit that specifies whether to  
3 assemble an output from multiple virtual tributary (VT)  
4 connections or handle the output as an synchronous transport  
5 signal (STS) connection;  
6 a circuit to check the state of the control bit; and  
7 control circuitry that uses a second memory to switch a  
8 predetermined number of entries together based on a state of  
9 the control bit.

1 25. The apparatus of claim 25 wherein the control circuitry  
2 is configured to handle the output as an STS connection  
3 when the control bit is set

1 26. The apparatus of claim 25 wherein the control circuitry  
2 is configured to assemble the output from multiple VT  
3 connections when the control bit is not set.

1 27. The apparatus of claim 25 wherein the memory includes a  
2 second control bit that specifies whether payloads are  
3 independent or concatenated, and the control circuit is  
4 configured to switch a predetermined number of payloads  
5 together based on a state of the second control bit.